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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,799	07/02/2001	Martin Becken	KPS12USA	1259

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EXAMINER

TRIEU, VAN THANH

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,799

Applicant(s)

BECKEN, MARTIN

Examiner

Van T Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-12 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 5,6 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "2-pole plug-in system" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

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REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

"Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. The disclosure is objected to because of the following informalities: the

specification does not contain of the following titles:

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

Appropriate correction is required.

Claim Objections

3. Claim 8 is objected to because of the following informalities: line 3, the typing

error of "e&tension". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 7, 8, 10-12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brooks et al** [US 5,485,154] in view of **Kreft** [US 5,376,778].

Regarding claim 1, the claimed a device (the communication device including a fixed base station wirelessly communicates with a plurality of remote devices 1 being moving within a predetermined space over with magnetic field transmission link space for identifying many different objects such as personnel, livestock, trains, wagons, shipping containers, and/or security cards, see Fig. 1, col. 2, lines 28-39); and the transmission for feeding the energy supply for mobile device (the base station generates magnetic field energy, which are received by the remote devices 1 through powering coil for supply electrically power thereto, see Figs. 1A-1C, col. 4, lines 15-18); and the transmission device for transmission across transmission line (the transmission field comprises communication and/or powering coil of the base station and the passive coil of the remote device 1, which are structured mechanically and topologically independent of each other, see Figs. 1A-1C, col. 4, lines 15-18 and col. 6, lines 45-49); but **Brooks et al** fails to disclose the at least one sensor device connected to the mobile device, which bring about modulation on transmission link between the two devices in accordance with a random signal string of the sensor. However, **Brooks et al** teaches

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that the remote device 1 is coupled with a carrier oscillator, memory and code generator circuit, and a modulator circuit for modulating the identification codes and other information to be transmitted back to the base station, which are random internal selection depending on particular remote device/transponder's application, see Figs. 1, 3 and 4, col. 5, lines 13-31, col. 7, lines 49-59 and col. 10, lines 5-29. **Kreft** suggests that a portable chip card 1 is electrically powered through wireless transmission coils 2 and returning of modulated identification code and sensor information data over a short distance to an interrogator. The chip card 1 is coupled to sensor 6 such as temperature sensor, acceleration sensors, sound sensors and/or chemical sensors, see Fig. 1, col. 1, lines 41-63, col. 2, lines 5-19 and col. 3, lines 27-66. Therefore, it would have been obvious to one skill in the art at the time the invention was made to adapt the sensor of **Kreft** to the remote device of **Brooks et al** because the other information is related to the remote device being carried/attached to a personnel, livestock, trains, wagons, shipping containers under communicating, monitoring and tracking. The sensor is very small and weightless, which will not affect the physical structure of the remote device or transponder, and as well as electronic operation functions.

Regarding claim 2, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the mobile including two or three-dimensional form, see col. 7, lines 49-67.

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Regarding claim 3, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and including the tuned resonant circuits (the tuned pick-up coil, see col. 5, lines 10-14 and col. 6, lines 45-54).

Regarding claim 7, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the extension of the coil device of the stationary device is greater than the extension of the coil device of the mobile device (the three-dimension coils of the base station could be larger than of the coil of a remote transponder device 1, see col. 7, lines 7-67).

Regarding claim 8, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the extension of the mobile coil device is greater than the extension of the stationary device (the three-dimension coils of the remote transponder device 1 could be larger than of the coil of the base station, see col. 7, lines 7-67).

Regarding claim 10, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the increase with the magnitude of the extension of the coil devices (the magnitude and phase of the magnetic field, see col. 5, lines 10-24).

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Regarding claim 11, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, see Figs. 1A-1C.

Regarding claim 12, **Brooks et al** fails to disclose the mobile device can be guided on a straight line along the coil device of the stationary device where significant deviations occur in parallel guidance in radiation to the other two spatial directions. However, **Brooks et al** teaches that the transponder coils are moving in different orientations and small distance related to the base station in two or three dimensional directions for providing power and information data transmission, see Figs. 1A-1C, col. 5, lines 10-31 and col. 7, lines 49-67. Therefore, it would have been obvious to one skill in the art to recognize that the orientations between two coils of **Brooks et al** and **Kreft** are functionally equivalent to the claimed guiding on a straight line between the coils, which could be one of the coil antenna orientations.

Regarding claim 14, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the damper (the balance of transponder circuit or the carrier oscillator circuit, see Figs. 2A, 2B, 3A, 3B and 4A).

Regarding claim 15, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and all the electronic components are low power components.

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Regarding claim 16, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the protocols of any degree of complexity (the selection of different frequency channels and carrier signals of complexity, see col. 2, lines 51-67, col. 4, lines 11-67).

Regarding claim 17, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the digital sensor (the sensor 6, see col. 3, lines 42-66 of combined reference **Kreft**)

Regarding claim 18, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the predefined type of modulation can be used to distinguish any statuses of the sensors on the mobile device from malfunctions of the device, which reads upon the identifying of failure rate criterions from each of the transponders, see col. 8, lines 22-67, col. 9, lines 1-67 and col. 10, lines 1-29.

Regarding claim 19, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the down stream computer systems (the inventory control computer security, see col. 2, lines 32-38).

Regarding claim 20, all the claimed subject matters are discussed between **Brooks et al** and **Kreft** in respect to claim 1 above, and the decoding device (the decoder, see Fig. 1A).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Brooks et al** and **Kreft** and further in view of **Boskamp et al** [US 6,249,121]. Regarding claim 4, **Brooks et al** fails to disclose the mechanical independence of the coil device, wherein the transmission device is designed for transmission on a closed, particularly circular, travel path. However, **Brooks et al** teaches that the coils are traveling in different orientations to each other in two or three-dimensional direction, see col. 7, lines 49-67. **Boskamp et al** suggests that a whole body RF coil system for use with an open magnetic resonance imaging system comprising first and second quadrature RF coil sets 36 and 38 positioned on opposing sides of an imaging volume. Each RF coil set 36 and 38 is constructed in a circular structure, see Figs. 1-9, col. 3, lines 26-34 and col. 6, lines 14-40. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to substitute the RF coil of **Boskamp et al** for the coil of **Brooks et al** and **Kreft** because the flat RF coils are inefficient compared to cylindrical-shaped or circular coils and required lesser power amplifier.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Brooks et al** and **Kreft** and further in view of **Townsend et al** [US 6,529,127]. Regarding claim 9, **Brooks et al** fails to disclose the at least one coil device can be constructed for any length of link by using at least one multi-core line whose cores (n) are connected to form a coil with n windings. However, **Brooks et al** teaches that the transponder coils contains a tuned pickup coil for extracting power and/or timing and/or

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other information from the magnetic field, see Fig. 1A, col. 5, lines 10-14. **Townsend et al** suggests that a remote powering and communication method combined with multi-channel, embedded microprocessor with highly integrated sensor signal conditioners and coil antenna, which have 10 turn secondary winding wound on one half of a Ferroxcube pot core material, see Fig. 2, col. 5, lines 1-7. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the coil antenna having core and number of winding of **Townsend et al** for the coils of **Brooks et al** and **Kreft** for efficient power transfer and information data transmission.

Conclusion

7. Claims 5, 6 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mickle et al discloses an apparatus for energizing a remote station interact with an object of interest, comprising a base station for transmitting energy in space to and communicating with the remote station. [US 6,615,074]

Kaplan et al discloses an interrogator-responder system wherein the passive transponder receiving an inductively coupled electromagnetic power field from an interrogator unit and communicating information. [US 3,689,885]

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Boettger et al discloses an electrically conductive work pieces being tested by a transducer comprising a plurality of transmitting and receiving coils are connected along pole pieces. [US 4,793,185]

9. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (703) 308-5220. The examiner can normally be reached on Mon-Fri from 7:00 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (703) 305-4717.

The office facsimile number is (703) 872-9314.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long horizontal flourish extending to the right.

Van Trieu
Primary Examiner
Date: 3/17/04